Kenneth (NMI) Schofield, Mark L. Larson and Keith J. Vadas Applicants For

REARVIEW VISION SYSTEM WITH INDICIA

OF BACKUP TRAVEL

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The rearview system of claim 50 wherein said indicia responds to the direction of turn of 2 551. the vehicle.

The rearview system of claim 50 wherein said indicia responds to at least one of the vehicle's steering system, the vehicle's differential system and a compass.

The rearview system of claim 50 wherein said graphic overlayer is not superimposed on said rearward image when the gear actuator of the vehicle does not select a reverse gear.

The rearview system of claim 50 wherein said indicia comprise markings that provide indication of distance behind the vehicle.

The rearview system of claim 50 wherein said indicia comprise markings superimposed at intervals on said rearward image corresponding to the boundaries of the lane in which the vehicle is reversing.

The rearview system of claim 55 wherein said graphic overlayer is responsive to a signal indicative of the rate of turn of the vehicle.

The rearview system of claim 50 wherein said graphic overlayer is responsive to a signal indicative of the rate of turn of the vehicle.

The rearview system of claim 50 wherein said graphic overlayer comprises markings that move laterally on said rearward image, with reduced separation, to correspond to positions of a curved lane boundary and vertically on said rearward image to compensate for the difference between distances along a straight and curved path.

The rearview system of claim 50 wherein said rearview vision system includes a distance-sensing system.

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	'Applic For	eants :	•	I) Schofield, Mark L. Larson and Keith J. Vadas VISION SYSTEM WITH INDICIA TRAVEL
1.	Page	:	3	10
1	60.	The rearvie	ew system of claim	n 59° wherein said distance-sensing system is selected from
•	the gro	•		Itrasonic sensing, and an infrared detection distance-
	measu	ring system.		
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1	<i>6</i> 1.	The rearvie	w system of claim	n 50 wherein said image capture device has a field of view
•	which			itudinal axis of the vehicle.
, 1	,)			
1/	<i>6</i> 2.	The rearvie	w system of claim	n 50 wherein said image capture device comprises a
	pixilat	ed imaging	array.	, ,
1	Ϊ.			(2)
1.	63.	The rearvie	ew system of claim	n 62 wherein said pixilated array comprises a CMOS
~	imagin	ng array.		
. C	15			<u>ا</u> ر
,	64.	The rearvie	ew system of claim	n 50 wherein said graphic overlayer has a form that is a
 .:	function	on of at least	t one of the direction	ion of travel and speed of the vehicle.
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	65.	The rearvie	ew system of claim	n 64 wherein said indicia comprises at least one mark
	superi	mposed on s	said rearward imag	ge.
	17			
	66.	The rearvie	w system of claim	n 50 wherein said rear vision system includes a monitoring
	device	for monitor	ring vehicle turning	g.
	18			17
	J81.			m 66 wherein said monitoring device comprises one of a
				's steering system, a monitor of an output of an electronic
	compa	ss and a mo	nitor of the vehicle	e's differential drive system.
	19			
	<i>6</i> 8.		4	m 50 wherein said display system comprises one of a flat
	-	display and	a cathode ray tube	>.
	v).			
	ø 9.	The rearvio	ew system of clain	m 50 wherein said display system comprises a flat panel

display.

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The rearview system of claim 69 wherein said flat panel display comprises one of a liquid crystal display, a plasma display and a field emission display.

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71. The rearview system of claim 69 wherein said flat panel display comprises a liquid crystal display.

The rearview system of claim 50 wherein said display system is positioned within the field of view of the driver without obstructing the view through the windshield.

73. The rearview system of claim 50 wherein said display system is mounted to one of the dashboard, facia, header and windshield of the vehicle.

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74. The rearview system of claim 50 wherein said display system is mounted at a position conventionally occupied by an interior rearview mirror.

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The rearview system of claim 50 wherein said display system comprises a display of one of a projected and a virtual image.

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76. The rearview system of claim 50 wherein said display system comprises a heads-up display.

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The rearview system of claim 50 wherein said indicia comprises at least one mark superimposed on said rearward image.

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78. The rearview system of claim 77 wherein said at least one mark superimposed on said rearward image comprises a plurality of marks superimposed on said rearward image at rearward intervals.

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79. The rearview system of claim 78 wherein said plurality of marks superimposed on said rearward image are positioned to correspond to boundaries of the lane in which the vehicle is traveling.

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80. The rearview system of claim 78 wherein said plurality of marks are moved laterally to correspond to positions of curved lane boundaries when the vehicle is turning.

3 8x.

A rearview vision system for a vehicle having a gear actuator, comprising:

an image capture device mounted at the rear of the vehicle and having a field of view directed rearwardly of the vehicle;

a display system viewable by a driver of the vehicle which displays a rearward image output of said image capture device;

a graphic overlayer superimposed on said rearward image when the gear actuator of the vehicle selects a reverse gear; and

wherein said graphic overlayer is disabled when the gear actuator of the vehicle is not in reverse gear.

82. The rearview system of claim 81 wherein said graphic overlayer includes indicia of the anticipated path of travel of the vehicle.

The rearview system of claim 82 wherein said indicia responds to at least one of the vehicle's steering system, the vehicle's differential system and a compass.

The rearview system of claim 82 wherein said indicia responds to the direction of turn of the vehicle.

The rearview system of claim 82 wherein said indicia comprise markings that provide indication of distance behind the vehicle.

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The rearview system of claim 82 wherein said indicia comprise markings superimposed at intervals on said rearward image corresponding to the boundaries of the lane in which the vehicle is reversing.

The rearview system of claim 86 wherein said graphic overlayer is responsive to a signal indicative of the rate of turn of the vehicle.

88. The rearview system of claim 81 wherein said graphic overlayer is responsive to a signal indicative of the rate of turn of the vehicle.

89. The rearview system of claim 81 wherein said indicia comprise markings that move laterally on said rearward image, with reduced separation, to correspond to positions of a curved lane boundary and that move vertically on said rearward image to compensate for the difference between distances along a straight and curved path.

96. The rearview system of claim 81 wherein said rearview vision system includes a distance-sensing system.

91. The rearview system of claim 90 wherein said distance-sensing system is selected from the group consisting of a radar, an ultrasonic sensing, and an infrared detection distance-measuring system.

7 92. The rearview system of claim 81 wherein said image capture device has a field of view which is symmetrical about the longitudinal axis of the vehicle.

93. The rearview system of claim wherein said image capture device comprises a pixilated imaging array.

94. The rearview system of claim 93 wherein said pixilated array comprises a CMOS imaging array.

Kenneth (NMI) Schofield, Mark L. Larson and Keith J. Vadas **Applicants** REARVIEW VISION SYSTEM WITH INDICIA OF BACKUP TRAVEL Page_ The rearview system of claim 82 wherein said graphic overlayer has a form that is a function of at least one of the direction of travel and speed of the vehicle. The rearview system of claim 95 wherein said indicia comprises at least one mark superimposed on said rearward image. The rearview system of claim & wherein said rear vision system includes a monitoring device for monitoring vehicle turning. The rearview system of claim 97 wherein said monitoring device comprises one of a monitor of movement of the vehicle's steering system, a monitor of an output of an electronic compass and a monitor of the vehicle's differential drive system. The rearview system of claim 81 wherein said display system comprises one of a flat panel display and a cathode ray tube. The rearview system of claim & wherein said display system comprises a flat panel display.

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101. The rearview system of claim 100 wherein said flat panel display comprises one of a liquid crystal display, a plasma display and a field emission display.

102. The rearview system of claim 100 wherein said flat panel display comprises a liquid crystal display.

The rearview system of claim 81 wherein said display system is positioned within the field of view of the driver without obstructing the view through the windshield.

104. The rearview system of claim 81 wherein said display system is mounted to one of the dashboard, facia, header and windshield of the vehicle.

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105. The rearview system of claim 81 wherein said display system is mounted at a position conventionally occupied by an interior rearview mirror.

106. The rearview system of claim 81 wherein said display system comprises a display of one of a projected and a virtual image.

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107. The rearview system of claim 81 wherein said display system comprises a heads-up display.

108. The rearview system of claim 82 wherein said indicia comprises at least one mark superimposed on said rearward image.

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109. The rearview system of claim 108 wherein said at least one mark superimposed on said rearward image comprises a plurality of marks superimposed on said rearward image at rearward intervals.

110. The rearview system of claim 109 wherein said plurality of marks superimposed on said rearward image are positioned to correspond to boundaries of the lane in which the vehicle is traveling.

The rearview system of claim 109 wherein said plurality of marks are moved laterally to correspond to positions of curved lane boundaries when the vehicle is turning.

REMARKS

The present amendment submits claims for examination. Entry of the amendment prior to calculation of the filing fee is requested.

New claims 50-111 are fully supported by the original application. Accordingly, no new matter is added.